



CIVIL ENGINEERS  
LAND SURVEYORS  
LAND PLANNERS

October 14, 2024

Matt Exley  
Manager of Facilities  
Building Department, Ordinance & Facilities  
City of Rochester Hills  
1000 Rochester Hills Drive  
Rochester Hills, MI 48309

**RE: Van Hoosen Jones Stoney Creek Cemetery  
Irrigation Design  
City of Rochester Hills, Michigan  
Proposal #9-E386**

Dear Mr. Exley:

In response to your request, we have reviewed the project requirements relative to preparing an irrigation design associated with the Van Hoosen Jones Stoney Creek Cemetery. As you are aware, NFE provided assorted options associated with the proposed installation as a part of the study we conducted last year. You have stated that the City has decided to move this project forward through the design process and that the City desires a 3" to 4" tap onto the City of Rochester's 8" water main identified as Option 2 in our report. :

Based on our review of the project requirements, we have identified the following scope of work required to develop these projects and advance them to the construction phase:

### **SCOPE OF WORK**

#### **PHASE I SERVICES – PRE-ENGINEERING**

- Perform all field investigation and survey services required to support the full design development of the project. Field investigation and survey services will include the following:
  - Update required field survey of the project development area and prepare existing condition drawings consistent with Rochester Hills requirements for project bidding.
  - Existing underground utilities shall be located and identified, including rim elevations and pipe inverts.
  - Perform field engineering analysis to identify construction constraints, conditions and make engineering assessment of current conditions to support design initiatives.

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NOWAK & FRAUS ENGINEERS

46777 WOODWARD AVENUE  
PONTIAC, MI 48342-5032

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VOICE: 248.332.7931  
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## **PHASE II SERVICES – PRELIMINARY ENGINEERING**

- Prepare preliminary construction plans in accordance with City requirements. Construction plans to include the following:
  - Cover sheet, including location map
  - Existing Condition Plans
  - Preliminary Plans
  - Preliminary Typical Detail sheet with existing and proposed cross-sections.
  - Preliminary Electrical/Meter Design
  - Standard Detail Sheet(s)
- Plan sheets will be drawn to a scale of 1"=40' horizontal and 1"=4' vertical. Quantity lists will be provided on each plan sheet
- Identify work items consistent with Rochester Hills Standard Specifications for Construction and prepare preliminary Engineer's Opinion of Construction Cost.
- Coordinate project development with the City and permitting agencies as required.
- Identify potential utility conflicts and coordinate with utility companies to resolve conflicts.
- Attending project design review meeting to present preliminary design and obtain critical feedback from City staff and departments.
- Attend public hearings, City Commission meeting, etc. as requested

## **PHASE III SERVICES – FINAL ENGINEERING**

- Prepare final construction plans in accordance with City requirements. Construction plans to include the following:
  - Existing Condition Plans
  - Final Plans including and utility work
  - Final Typical Detail Sheet with existing and proposed Cross-Sections.
  - Final Electrical Design
  - Standard Detail Sheet
  - Construction Staging Plan
- Identify work items consistent with Rochester Hills Standard Specifications for Construction and prepare final Engineer's Opinion of Construction Cost.
- Coordinate project development with the City and permitting agencies, as required for project permits. Apply for and obtain all required permits from permitting authorities.
- Prepare construction bid documents including modified Rochester Hills boiler plate, standard specifications for construction. We note it may be advisable to merge this project with other park projects undertaken in the City to assure a robust bidding environment.
- Submit 90% of the complete final design package to City for final review and comments.
- Make all necessary changes to final design documents and assist City with project bidding process
  - Review submitted bids for completeness and accuracy and prepare a bid tabulation sheet
  - Review references and prepare a letter recommending award to the desired contractor.

- Attending project meetings as required to develop final design consistent with City requirements. Based on the work outlined above, we submit the following engineering fee for your approval:

Based on the work outlined above, we submit the following engineering fee for your approval:

**PROJECT – VAN HOOSEN CEMETERY IRRIGATION REPLACEMENT PROJECT**

<u>WORK</u>	<u>ESTIMATED FEE</u>
Phase I – Pre-Engineering Services	\$3,096.00
Phase II – Preliminary Engineering Services	\$13,448.00
Phase III – Final Engineering Services	\$17,528.00
Reimbursable Expenses	\$ 500.00
<b>TOTAL NOT-TO-EXCEED AMOUNT PROJECT 1:</b>	<b><u>\$34,572.00</u></b>

We submit the following cost breakdown as evidence of our expected costs associated with the design of the project:

**PHASE I – PRE-ENGINEERING**

<u>Classification</u>	<u>Description of Work</u>	<u>Estimate Hours</u>	<u>Hourly Rate</u>	<u>Amount</u>
2 Person Survey Crew	Topographic Survey	8	\$139.00	\$ 1,112.00
Engineering Tech III	Topographic Survey	12	84.00	1,008.00
Engineer II	Field Review/Investigation	12	78.00	936.00
Principal	Coordination	2	120.00	<u>240.00</u>
<b>Subtotal Phase I</b>				<b>\$3,096.00</b>

**PHASE II – PRELIMINARY ENGINEERING**

<u>Classification</u>	<u>Description of Work</u>	<u>Estimate Hours</u>	<u>Hourly Rate</u>	<u>Amount</u>
Engineering Tech. III	Prepare Const. Drawings in CAD	40	\$ 84.00	\$ 3,360.00
Project Engineer	Design of Improvements	40	96.00	3,840.00
Engineer II	Quantities & Cost Estimate, etc.	24	78.00	1,092.00
Landscape Architect	Design of Improvements	16	106.00	1,696.00
Principal	Review & Coordinate	8	120.00	960.00
Irrigation Consultant				<u>\$ 2,500.00</u>
<b>Subtotal Phase II:</b>				<b>\$13,448.00</b>

**PHASE III – FINAL ENGINEERING**

<u>Classification</u>	<u>Description of Work</u>	<u>Estimate Hours</u>	<u>Hourly Rate</u>	<u>Amount</u>
Engineering Tech. III	Prepare Const. Drawings in CAD	40	\$ 84.00	\$ 3,360.00
Project Engineer	Design of Improvements	40	96.00	3,840.00
Engineer II	Quantities & Cost Estimate, etc.	16	78.00	1,248.00
Landscape Architect	Design of Improvements	20	106.00	2,120.00
Principal	Review & Coordinate	8	120.00	960.00
Irrigation Consultant				2,500.00
Electrical Consultant				3,500.00
<b>Subtotal Phase III:</b>				<b>\$ 17,528.00</b>

**REIMBURSABLES**

Blueprinting, delivery charges, etc.	\$ 500.00
<b>Subtotal Reimbursables: \$ 500.00</b>	

**TOTAL NOT-TO-EXCEED AMOUNT PROJECT 1: \$ 34,572.00**

The work will be undertaken in accordance with our professional services agreement dated August 5, 2020, and we will proceed with the design work upon your authorization and complete the required construction documents within the following design development schedule:

Pre-Engineering Phase	Completed by November 8, 2024
Preliminary Engineering Phase	Completed by November 29, 2024
Final Engineering Phase	Completed by December 31, 2023
Permits	Completed by January 10, 2025
Bid Package Complete	Completed by January 10, 2025
Bids Received	February, 2025

Please be advised that invoices will be based on actual hours and work required as approved by your office and the not-to-exceed amount will not be exceeded unless authorized by our office. We look forward to collaborating with you on this important project for the city.

Matt Exley  
City of Rochester Hills – Facilities Coordinator  
Proposal #9-E386  
October 14, 2024  
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If you have any questions or require further information, please feel free to contact me.

Sincerely,  
Nowak & Fraus Engineers



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Jeffrey J. Huhta, P.E., P.S.  
Managing Partner

Date: October 14, 2024

Recommended By:  
CITY OF ROCHESTER HILLS

\_\_\_\_\_  
Matt Exley, Facilities Coordinator

Date: \_\_\_\_\_

Approved By:  
CITY OF ROCHESTER HILLS

\_\_\_\_\_  
Bryan K. Barnett, Mayor

Date: \_\_\_\_\_